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LOCATION BASED DISCOVERY OF REAL-TIME MERCHANT DEVICE ACTIVITY

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 62/097,023, titled "Location Based Discovery of Real-time Merchant Device Activity," filed Dec. 26, 2014, which is incorporated by reference herein in its entirety.

FIELD

Embodiments of the invention relate, generally, to techniques for sharing real-time electronic data associated with merchant locations with networked consumer devices and based on consumer device location.

BACKGROUND

Financial transactions between merchants and consumers typically require the consumers to present a form of payment to the merchant. As a result, consumers may be required to keep wallets that include payment instruments such as cash, credit cards, debit cards, deal vouchers, coupons, reward tracking cards, checks or the like that may be accepted by merchants and/or devices used at the point-of-sale locations (e.g., point-of-sale devices, such as cash registers, credit card readers, etc.). Various merchants have begun to adopt point-of-sale merchant devices capable of communicating with mobile consumer devices (e.g., smart phones) to help streamline electronic payments because of the widespread adoption of such mobile consumer devices. Through applied effort, ingenuity, and innovation, solutions to improve such systems have been identified and are described in detail below.

BRIEF SUMMARY

Some embodiments may provide for a system configured to provide improved consumer interfaces to consumer devices that are responsive to changing consumer device location. For example, the system may include one or more servers with communication circuitry configured to connect with consumer devices and merchant devices via a network. The one or more servers may further include processing circuitry configured to: receive, via the network, transaction data from the merchant devices; determine an activity level score for each of the plurality of merchant locations based on the transaction data; receive, via the network and from a consumer device, consumer device location data indicating a consumer device location of the consumer device; determine, based on a comparison of the consumer device location and the plurality of merchant locations, one or more local merchant locations to the consumer device location; generate a consumer interface including an ambient map display, wherein the ambient map display includes a graphical representation of a map with the one or more local merchant location indicators within the map that indicate the activity level score for the one or more local merchant locations; and provide the consumer interface to the consumer device via the network.

In some embodiments, the processing circuitry configured to determine the one or more local merchant locations proximate to the plurality of merchant locations may include

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processing circuitry being configured to: determine a distance threshold; and determine the one or more local merchant locations from the plurality of merchant locations based on determining that the one or more local merchant locations are within the distance threshold to the consumer device location.

In some embodiments, the processing circuitry configured to determine the distance threshold may include the processing circuitry being configured to: determine, based on the consumer device location data a travel speed of the consumer device; and determine the distance threshold based on the travel speed of the consumer device.

In some embodiments, the processing circuitry configured to determine the distance threshold may include the processing circuitry being configured to: receive, via the network and from the consumer device, consumer device input indicating a mode of transportation; and determine the distance threshold based on the mode of transportation.

In some embodiments, the processing circuitry configured to determine the distance threshold may include the processing circuitry being configured to: determine, based on the consumer device location data, a mode of transportation; and determine the distance threshold based on the mode of transportation.

In some embodiments, the processing circuitry configured to determine the activity level score for each of the plurality of merchant locations based on the transaction data may include the processing circuitry being configured to determine, based on the transaction data, an average rate of received transaction data instances for a predetermined period of time.

In some embodiments, the processing circuitry configured to determine the activity level score for each of the plurality of merchant locations based on the transaction data may include the processing circuitry being configured to determine, based on the transaction data, a projected activity level.

In some embodiments, the processing circuitry configured to determine the activity level score for each of the plurality of merchant locations based on the transaction data may include the processing circuitry being configured to determine, based on the transaction data, a current activity level.

In some embodiments, the transaction data from the merchant devices may indicate consumer device interactions with merchant devices via wireless direct connections. The processing circuitry configured to determine the activity level score for each of the plurality of merchant locations based on the transaction data may include the processing circuitry being configured to determine the activity level score based on the consumer device interactions associated with each of the plurality of merchant locations.

In some embodiments, the transaction data may include an indication of a completed transaction. The processing circuitry may be further configured to, for each completed transaction of a local merchant location, provide an indication of the completed transaction as a visual enhancement to a local merchant indicator associated with the local merchant location.

In some embodiments, at least one of the one or more local merchant location indicators may be visually enhanced with blink rates that are variable based on the activity level scores.

In some embodiments, the processing circuitry may be further configured to, in response to receiving consumer device input indicating a selection of a local merchant location indicator, provide a merchant display to the con-